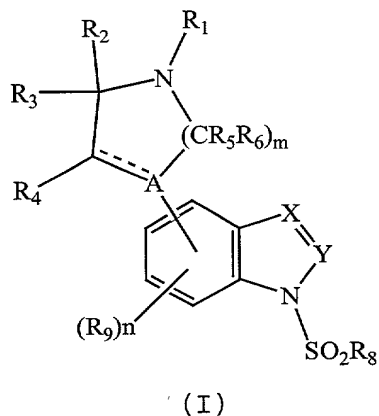


WHAT IS CLAIMED IS:

1. A compound of formula I



wherein

A is C, CR₁₀ or N;

X is CR₁₁ or N;

Y is CR₇ or N with the proviso that when X is N, then
Y must be CR₇;

R₁ is H, C₁-C₆alkylcarbonyl, C₁-C₆alkylcarbonyloxy or
an C₁-C₆alkyl, C₁-C₆alkenyl, C₁-C₆alkynyl or
cycloheteroalkyl group each optionally
substituted;

R₂, R₃, R₄, R₅ and R₆ are each independently H,
halogen, OH or an optionally substituted C₁-
C₆alkyl group;

R₇ and R₁₁ are each independently H, halogen or an C₁-
C₆alkyl, aryl, heteroaryl or C₁-C₆alkoxy group
each optionally substituted;

R₈ is an C₁-C₆alkyl, aryl or heteroaryl group each
optionally substituted;

R₉ is H, halogen or an C₁-C₆alkyl, C₁-C₆alkoxy, C₁-C₆alkenyl, aryl or heteroaryl group each optionally substituted;

R₁₀ is H, OH or an optionally substituted C₁-C₆alkoxy group;

m is an integer of 1, 2 or 3;

n is 0 or an integer of 1, 2 or 3; and

---- represents a single bond or a double bond; or a pharmaceutically acceptable salt thereof.

2. The compound according to claim 1 wherein A is N and m is 2.

3. The compound according to claim 1 wherein R₈ is an optionally substituted phenyl group.

4. The compound according to claim 1 wherein R₂, R₃, R₄, R₅ and R₆ are H.

5. The compound according to claim 2 wherein R₁ is H or a C₁-C₆alkyl or cycloheteroalkyl group each optionally substituted.

6. The compound according to claim 5 selected from the group consisting of:

1-(phenylsulfonyl)-4-piperazin-1-yl-1H-indole;

1-[(2-bromophenyl)sulfonyl]-4-piperazin-1-yl-1H-indole;

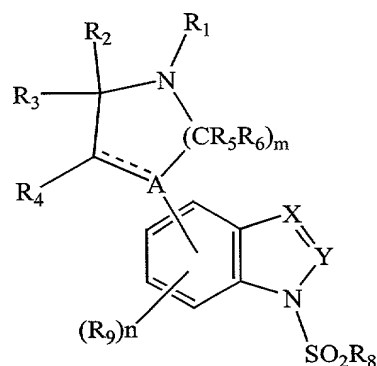
1-[(6-chloroimidazo[2,1-b][1,3]thiazol-5-yl)sulfonyl]-4-piperazin-1-yl-1H-indole;

1-[(3,4-dimethoxyphenyl)sulfonyl]-4-piperazin-1-yl-1H-indole;

- 1-[(5-chloro-3-methyl-1-benzothien-2-yl)sulfonyl]-4-piperazin-1-yl-1H-indole;
- 1-[(4-bromophenyl)sulfonyl]-4-piperazin-1-yl-1H-indole;
- 1-[(5-bromothien-2-yl)sulfonyl]-4-piperazin-1-yl-1H-indole;
- 5 1-[(4,5-dichlorothien-2-yl)sulfonyl]-4-piperazin-1-yl-1H-indole;
- methyl 4-[(4-piperazin-1-yl-1H-indol-1-yl)sulfonyl]phenyl ether;
- 10 4-piperazin-1-yl-1-{[4-(trifluoromethoxy)phenyl]sulfonyl}-1H-indole;
- 4-(4-benzylpiperazin-1-yl)-1-(phenylsulfonyl)-1H-indole;
- 4-(4-benzylpiperazin-1-yl)-1-[(2-bromophenyl)sulfonyl]-1H-indole;
- 15 4-(4-benzylpiperazin-1-yl)-1-[(6-chloroimidazo[2,1-b][1,3]thiazol-5-yl)sulfonyl]-1H-indole;
- 4-(4-benzylpiperazin-1-yl)-1-[(3,4-dimethoxyphenyl)sulfonyl]-1H-indole;
- 4-[4-(3-methoxybenzyl)piperazin-1-yl]-1-(phenylsulfonyl)-1H-indole;
- 20 1-(phenylsulfonyl)-4-[4-(pyridin-4-ylmethyl)piperazin-1-yl]-1H-indole;
- 1-(phenylsulfonyl)-4-[4-(pyridin-3-ylmethyl)piperazin-1-yl]-1H-indole;
- 25 1-[(2-bromophenyl)sulfonyl]-4-[4-(3-methoxybenzyl)piperazin-1-yl]-1H-indole;
- 1-[(2-bromophenyl)sulfonyl]-4-[4-(pyridin-4-ylmethyl)piperazin-1-yl]-1H-indole;
- 1-[(2-bromophenyl)sulfonyl]-4-[4-(pyridin-3-ylmethyl)piperazin-1-yl]-1H-indole;
- 30 1-(phenylsulfonyl)-5-piperazin-1-yl-1H-indazole;

1-(phenylsulfonyl)-6-piperazin-1-yl-1H-indazole;
 1-[(2-bromophenyl)sulfonyl]-6-piperazin-1-yl-1H-indazole;
 1-[(4-bromophenyl)sulfonyl]-5-piperazin-1-yl-1H-indazole;
 1-[(4-bromophenyl)sulfonyl]-6-piperazin-1-yl-1H-indazole;
 5 1-[(5-bromothiophen-2-yl)sulfonyl]-5-piperazin-1-yl-1H-
 indazole;
 1-[(5-bromothiophen-2-yl)sulfonyl]-6-piperazin-1-yl-1H-
 indazole;
 1-[(4-fluorophenyl)sulfonyl]-5-piperazin-1-yl-1H-
 10 indazole;
 1-[(4-fluorophenyl)sulfonyl]-6-piperazin-1-yl-1H-
 indazole;
 methyl 4-[(5-piperazin-1-yl-1H-indazol-1-
 yl)sulfonyl]phenyl ether;
 15 1-phenylsulfonyl-4-(4-propylpiperazin-1-yl)-1H-indazole;
 1-phenylsulfonyl-4-piperazin-1-yl-1H-indazole;
 1-phenylsulfonyl-4-(4-phenethylpiperazin-1-yl)-1H-
 indazole;
 1-phenylsulfonyl-4-[4-(3-phenylpropyl)-piperazin-1-yl]-
 20 1H-indazole; and
 the pharmaceutically acceptable salts thereof.

7. A method for the treatment of a disorder of the
 central nervous system related to or affected by the 5-
 25 HT6 receptor in a patient in need thereof which comprises
 administering to said patient a therapeutically effective
 amount of a compound of formula I.



(I)

wherein

A is C, CR₁₀ or N;

X is CR₁₁ or N;

Y is CR₇ or N with the proviso that when X is N, then
Y must be CR₇;

R₁ is H, C₁-C₆alkylcarbonyl, C₁-C₆alkylcarbonyloxy or
an C₁-C₆alkyl, C₁-C₆alkenyl, C₁-C₆alkynyl or
cycloheteroalkyl group each optionally
substituted;

R₂, R₃, R₄, R₅ and R₆ are each independently H,
halogen, OH or an optionally substituted C₁-
C₆alkyl group;

R₇ and R₁₁ are each independently H, halogen or an C₁-
C₆alkyl, aryl, heteroaryl or C₁-C₆alkoxy group
each optionally substituted;

R₈ is an C₁-C₆alkyl, aryl or heteroaryl group each
optionally substituted;

R₉ is H, halogen or an C₁-C₆alkyl, C₁-C₆alkoxy, C₁-
C₆alkenyl, aryl or heteroaryl group each
optionally substituted;

R₁₀ is H, OH or an optionally substituted C₁-C₆alkoxy
group;

m is an integer of 1, 2 or 3;

n is 0 or an integer of 1, 2 or 3; and

---- represents a single bond or a double bond; or a pharmaceutically acceptable salt thereof.

5

8. The method according to claim 7 wherein said disorder is a motor disorder, anxiety disorder or cognitive disorder.

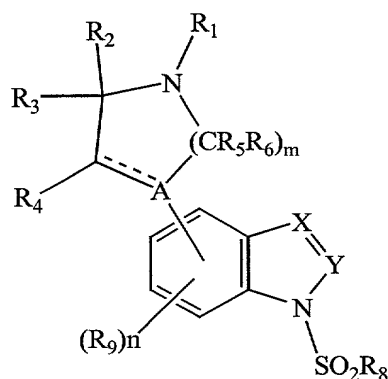
10 9. The method according to claim 7 wherein said
disorder is schizophrenia or depression.

10. The method according to claim 8 wherein said cognitive disorder is a neurodegenerative disorder.

15

11. The method according to claim 10 wherein said neurodegenerative disorder is Alzheimer's disease or Parkinson's disease

20 12. A pharmaceutical composition which comprises a
pharmaceutically acceptable carrier and an effective
amount of a compound of formula I.



(I)

wherein

A is C, CR₁₀ or N;

X is CR₁₁ or N;

Y is CR₇ or N with the proviso that when X is N, then

5 Y must be CR₇;

R₁ is H, C₁-C₆alkylcarbonyl, C₁-C₆alkylcarbonyloxy or
an C₁-C₆alkyl, C₁-C₆alkenyl, C₁-C₆alkynyl or
cycloheteroalkyl group each optionally
substituted;

10 R₂, R₃, R₄, R₅ and R₆ are each independently H,
halogen, OH or an optionally substituted C₁-
C₆alkyl group;

R₇ and R₁₁ are each independently H, halogen or an C₁-
C₆alkyl, aryl, heteroaryl or C₁-C₆alkoxy group
15 each optionally substituted;

R₈ is an C₁-C₆alkyl, aryl or heteroaryl group each
optionally substituted;

R₉ is H, halogen or an C₁-C₆alkyl, C₁-C₆alkoxy, C₁-
C₆alkenyl, aryl or heteroaryl group each
20 optionally substituted;

R₁₀ is H, OH or an optionally substituted C₁-C₆alkoxy
group;

m is an integer of 1, 2 or 3;

n is 0 or an integer of 1, 2 or 3; and

25 ---- represents a single bond or a double bond; or
a pharmaceutically acceptable salt thereof.

13. The composition according to claim 12 wherein A
is N and m is 2.

30

14. The composition according to claim 12 wherein R₈ is an optionally substituted phenyl group.

15. The composition according to claim 12 wherein
5 R₂, R₃, R₄, R₅ and R₆ are H.

16. The composition according to claim 13 wherein R₁ is H or a C₁-C₆alkyl or cycloheteroalkyl group each optionally substituted.

10

17. The composition according to claim 16 having a compound of formula I selected from the group consisting of:

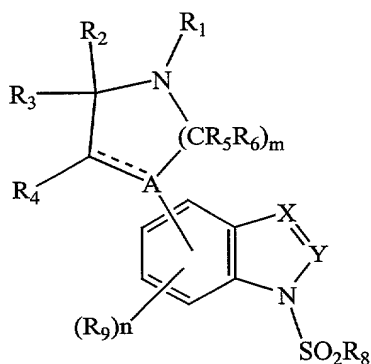
- 1- (phenylsulfonyl) -4-piperazin-1-yl-1H-indole;
15 1- [(2-bromophenyl)sulfonyl] -4-piperazin-1-yl-1H-indole;
1- [(6-chloroimidazo[2,1-b][1,3]thiazol-5-yl)sulfonyl] -4-piperazin-1-yl-1H-indole;
1- [(3,4-dimethoxyphenyl)sulfonyl] -4-piperazin-1-yl-1H-indole;
20 1- [(5-chloro-3-methyl-1-benzothien-2-yl)sulfonyl] -4-piperazin-1-yl-1H-indole;
1- [(4-bromophenyl)sulfonyl] -4-piperazin-1-yl-1H-indole;
1- [(5-bromothien-2-yl)sulfonyl] -4-piperazin-1-yl-1H-indole;
25 1- [(4,5-dichlorothien-2-yl)sulfonyl] -4-piperazin-1-yl-1H-indole;
methyl 4- [(4-piperazin-1-yl-1H-indol-1-yl)sulfonyl]phenyl ether;
4-piperazin-1-yl-1- { [4-
30 (trifluoromethoxy)phenyl]sulfonyl} -1H-indole;
4- (4-benzylpiperazin-1-yl) -1- (phenylsulfonyl) -1H-indole;

- 4 - (4-benzylpiperazin-1-yl) -1- [(2-bromophenyl) sulfonyl] -
1H-indole;
- 4 - (4-benzylpiperazin-1-yl) -1- [(6-chloroimidazo[2,1-
b] [1,3]thiazol-5-yl) sulfonyl] -1H-indole;
- 5 4 - (4-benzylpiperazin-1-yl) -1- [(3,4-
dimethoxyphenyl) sulfonyl] -1H-indole;
- 4 - [4- (3-methoxybenzyl) piperazin-1-yl] -1- (phenylsulfonyl) -
1H-indole;
- 1 - (phenylsulfonyl) -4- [4- (pyridin-4-ylmethyl) piperazin-1-
10 yl] -1H-indole;
- 1 - (phenylsulfonyl) -4- [4- (pyridin-3-ylmethyl) piperazin-1-
yl] -1H-indole;
- 1 - [(2-bromophenyl) sulfonyl] -4- [4- (3-
methoxybenzyl) piperazin-1-yl] -1H-indole;
- 15 1 - [(2-bromophenyl) sulfonyl] -4- [4- (pyridin-4-
ylmethyl) piperazin-1-yl] -1H-indole;
- 1 - [(2-bromophenyl) sulfonyl] -4- [4- (pyridin-3-
ylmethyl) piperazin-1-yl] -1H-indole;
- 1 - (phenylsulfonyl) -5-piperazin-1-yl-1H-indazole;
- 20 1 - (phenylsulfonyl) -6-piperazin-1-yl-1H-indazole;
- 1 - [(2-bromophenyl) sulfonyl] -6-piperazin-1-yl-1H-indazole;
- 1 - [(4-bromophenyl) sulfonyl] -5-piperazin-1-yl-1H-indazole;
- 1 - [(4-bromophenyl) sulfonyl] -6-piperazin-1-yl-1H-indazole;
- 1 - [(5-bromothien-2-yl) sulfonyl] -5-piperazin-1-yl-1H-
25 indazole;
- 1 - [(5-bromothien-2-yl) sulfonyl] -6-piperazin-1-yl-1H-
indazole;
- 1 - [(4-fluorophenyl) sulfonyl] -5-piperazin-1-yl-1H-
indazole;
- 30 1 - [(4-fluorophenyl) sulfonyl] -6-piperazin-1-yl-1H-
indazole;

methyl 4-[(5-piperazin-1-yl-1H-indazol-1-yl)sulfonyl]phenyl ether;
 1-phenylsulfonyl-4-(4-propylpiperazin-1-yl)-1H-indazole;
 1-phenylsulfonyl-4-piperazin-1-yl-1H-indazole;
 5 1-phenylsulfonyl-4-(4-phenethylpiperazin-1-yl)-1H-indazole;
 1-phenylsulfonyl-4-[4-(3-phenylpropyl)-piperazin-1-yl]-1H-indazole; and
 the pharmaceutically acceptable salts thereof.

10

18. A method for the preparation of a compound of formula I.



(I)

15

wherein

A is C, CR₁₀ or N;

X is CR₁₁ or N;

Y is CR₇ or N with the proviso that when X is N, then Y must be CR₇;

20

R₁ is C₁-C₆alkylcarbonyl, C₁-C₆alkylcarbonyloxy or an C₁-C₆alkyl, C₁-C₆alkenyl, C₁-C₆alkynyl or cycloheteroalkyl group each optionally substituted;

R_2 , R_3 , R_4 , R_5 and R_6 are each independently H,
halogen, OH or an optionally substituted C_1 -
 C_6 alkyl group;

R_7 and R_{11} are each independently H, halogen or an C_1 -
 C_6 alkyl, aryl, heteroaryl or alkoxy group each
optionally substituted;

R_8 is an C_1 - C_6 alkyl, aryl or heteroaryl group each
optionally substituted;

R_9 is H, halogen or an C_1 - C_6 alkyl, C_1 - C_6 alkoxy, C_1 -
 C_6 alkenyl, aryl or heteroaryl group each
optionally substituted;

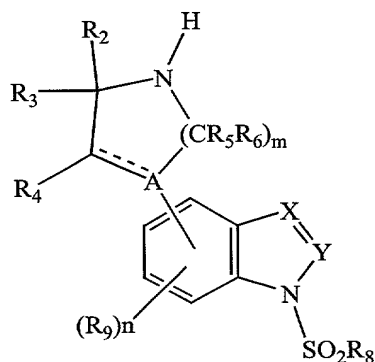
R_{10} is H, OH or an optionally substituted C_1 - C_6 alkoxy
group;

m is an integer of 1, 2 or 3;

n is 0 or an integer of 1, 2 or 3; and

---- represents a single bond or a double bond

said method which comprises reacting a compound of
formula Ia



(Ia)

wherein A, X, R_2 , R_3 , R_4 , R_5 , R_6 , R_7 , R_8 , R_9 , m and n are as
defined hereinabove for formula I with a compound R_1 -Hal

wherein R_1 is as defined hereinabove for formula I and Hal is Cl, Br or I.